AMSAT News Service Weekly Bulletins
Issue: ANS-362
Date: 1997-12-28
Sources: amsat-ans-1997-ans-362-weekly.txt

BJ Arts, WT0N, Amsat News Service editor
Daniel (Dan) James, NN0DJ, Amsat News Service Assistant editor

SB SAT @ AMSAT $ANS-362.01
HAPPY NEW YEAR

HR AMSAT NEWS SERVICE BULLETIN 362.01 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 28, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-362.01

From the staff at the Amsat News Service and the folks at AMSAT-NA, we all wish you a very happy and prosperous 1998.

[ANS thanks Bill Tynan, W3XO, President AMSAT-NA and
BJ Arts, WT0N, Amsat News Service editor for this announcement.]

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SB SAT @ AMSAT $ANS-362.02
SKN REMINDER

HR AMSAT NEWS SERVICE BULLETIN 362.02 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 28, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-362.02

Amateur radio operators worldwide are cordially invited to join in the 26th annual Straight Key Night on OSCAR, sponsored by AMSAT-NA for ham radio satellite enthusiasts.

According to Ray Soifer, W2RS, it's entirely unofficial with no rules, no scoring and no need to send in a log. Just call CQ SKN in the CW passband segment of any OSCAR satellite from 0000 to 2359 UTC on January 1, 1998, or answer a CQ SKN call from another station. OSCAR Zero (EME) contacts count too.

Of course, all SKN operating must be done with a straight hand key. Those participating are encouraged to nominate someone they worked for recognition as having the "best fist." To send in a "best fist" nomination, please send it to;

e-mail - w2rs@amsat.org

packet radio - W2RS @ WA2SNA or
W2RS @ GB7HSN

Regular mail can also be sent to the W2RS callbook address.
Those nominated will be featured in a bulletin sent to many of the amateur radio publications and posted via ANS, packet radio and the Internet in early February.

[ANS thanks Ray Soifer, W2RS, for this information]

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SB SAT @ AMSAT $ANS-362.03
AMSAT- UK NEWS

HR AMSAT NEWS SERVICE BULLETIN 362.03 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 28, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-362.03

Amsat-UK has informed the ANS that RJC Broadbent, G3AAJ,
will retire from the position of Amsat-UK Secretary as of 31st December;
he continues as a member of the Amsat-UK Committee (BoD) as representative
to various worthy bodies such as IARU, ISS etc.

The demanding task of Honorary Secretary has been taken on by Fred
Southwell, G6ZRU, (g6zru@amsat.org). And Fred's beautiful XYL, Jenny,
G1LIT, has taken the position of Honorary Treasurer.

Consequently the telephone and fax numbers are changing.
AMSAT-UK's telephone number changes to +44 1273 495733
and Fax to +44 1273 492927.

Other changes to the Amsat-UK Committee can be found in the most recent
issue of Oscar News which members should have received before Christmas.
In particular, folks renewing their annual donation should note that it
should now be sent to Fred's address (or rather Jenny's - which is the
same):

F S Southwell G6ZRU
40 Downsview
Smalldole
Henfield
West Sussex BN5 9YB
United Kingdom

An announcement by G2UK in Oscar News (No 20) of January 1978 hailed G3AAJ's
arrival as Amsat-UK's first Secretary; the grapevine said he "did things to
light-houses" for a living.

The very next edition of Oscar News saw Ron taking us to task for various
matters; let it never be said that he doesn't start out as he means to carry
on.

That edition also announced that Amsat-UK's minimum donation would be three
pounds for the ensuing year. It is no small tribute to Ron that now, twenty
years on, the amount has only risen by a small amount (to fourteen pounds);
his ability to extract money for the amateur satellite program from all and
sundry has been nothing short of phenomenal.

Ron's efforts over the years led to him receiving the MBE three years ago;
everyone is agreed that the award was well earned but, to Ron, someone
saying "thanks for your hard work" and buying him a beer is appreciated
almost as much.

[ANS thanks Richard W L Limebear, G3RWL, for this news.]

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SB SAT @ AMSAT $ANS-362.04
ONLINE QSL CONTROVERSY

HR AMSAT NEWS SERVICE BULLETIN 362.04 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 28, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-362.04

Goran Fagerstrom, SM0DRD, informed the Amsat News Service that in ANS Bulletin 355.06 (December 21), which included an item on the DXCC admissibility of online QSLs from their Cuban expedition (using the call T49C on satellite), citing that 'they were easy to modify'. The issue is not new, it was discussed over several reflectors and in email to them since they started their QSL Server at SK0UX this summer. For those unfamiliar with the concept, it means that you may search for your QSOs on the Internet and then download your QSL as a file for printing on your local printer, thus bypassing SASEs, IRCs, green stamps and saving a lot of work, money, and speed.

The T49C team has consciously chosen the present technical solution instead of including 'unbreakable electronic seals', like check-sums, in the file representing the QSL which you may download and print. Some people have suggested such solutions to detect modification, but at present the T49C team feels they are overkill. The key idea is that any awards committee can verify a QSO *at any time* by looking up the QSO again. So this concept in fact offers *greater* proof against tampering than traditional QSLs, which hams have been known o falsify (isn't that amazing). They have emphasized this to the DXCC Advisory Committee in positive discussions.

Many hams have said that making cards available via the Internet is 'an idea long overdue' with huge potential gains. One U.S. ham has already received our source code and has set up a QSLs Online Server of his own.

Feel free to explore the concept at http://ham.te.hik.se/clubs/sk0ux (go to the 'QSLs Online by SK0UX' page and to the Cuba page)! Comments are very welcome (to goran@tjansteforbundet.se) and they feel that there is a lot to be gained by continuing the already ongoing collective brain-storming. Their implementation is not cast in stone.

Stay tuned to ANS for further information about this controversy.
[ANS thanks Goran Fagerstrom, SM0DRD, for this information.]

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SB SAT @ AMSAT $ANS-362.05
VHF CONFERENCE

HR AMSAT NEWS SERVICE BULLETIN 362.05 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 28, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-362.05

The second annual Southeastern VHF Society Technical Conference will be held Friday and Saturday, April 3 and 4, 1998 in Atlanta, Georgia!

The dates and location of our inaugural Conference proved to be so popular that we are staying with the same weekend and location in 1998 - the Atlanta Marriott Northwest located between Atlanta and Marietta. A special Conference room rate of $69 per night plus tax is available to attendees. Fore reservations, please call the Marriott at 1-800-228-9290.

SVHFS Award: The Southeastern VHF Society will present the SVHFS Award annually in recognition of exceptional contributions and service to the Society or the VHF/UHF community in general. Presentation of the first SVHFS Award will take place at the Saturday evening banquet. For more information on the SVHFS Award, please contact Steve Adams, K4RF (ex-WS4F), SVHFS President at stevews4f@aol.com

Call for Papers: Program Chairman Bob Lear, K4SZ, has issued a call for papers. If you are interested in making a technical presentation or

having a paper published in the Proceedings, please contact Bob at:
Bob Lear, K4SZ
P. O. Box 1269
Dahlonega, GA. 30533
706-864-6229
k4sz@stc.net

Antenna Measurements: Antennas will be measured Friday, April 3rd starting with 144 MHz and working up in frequency - amateur bands only, please! A maximum of two antennas per band per individual may be tested. Please supply a female N connector or SO-239. Please indicate the antennas you will be bringing on your registration form. Walk-ups will be tested as time and space permit, so please pre-register! For more information, or if you would like to test a commercial antenna, please contact Antenna measurements Chairman Dale baldwin, WB0QGH, at wb0qgh@mindspring.com

Noise Figure Testing: Noise figure testing will be conducted on Saturday, April 4th. Attendees will be assigned a time for testing based on receipt of their Conference registration form. For more information, contact Noise Figure Measurements Co-Chairmen Charles Osborne, WD4MBK, at cosborne@pipeline.com or Fred Runkle, K4KAZ, at engineer@rightmove.com

In addition to technical presentations, antenna measurements and noise figure testing, activities will include:
Friday evening flea market
Saturday evening banquet
SVHFS auction
Family program

Please make plans now to attend this fun event! We are determined to make our second Conference even better than our first - with your help! Register before March 14, 1998 and receive a discount!

For more information on the Southeastern VHF Society or our 1998 Conference, please visit our web site at
http://www.akorn.net/~ae6e/svhfs

[ANS thanks Tad Danley, K3TD, for the news about the conference.]

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SB SAT @ AMSAT $ANS-362.06
NEW YEAR'S SOFTWARE TIP

HR AMSAT NEWS SERVICE BULLETIN 362.06 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 28, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-362.06

Richard W L Limebear G3RWL, gives ANS this software tip for 1998.
When the new year starts, so do the day-numbers in the keplers; and some old tracking software refuses to cross between the years. A tactic to use in this instance, until 1998 keplers arrive, is to deceive the software by giving it a 1997 date; i.e. 2 January is 33 December etc.

Another problem comes in some software when the epoch in the keplers contains spaces, i.e. "1998__4.xxxxx"; the tactic here is to edit the kepler file before feeding it into the program so that the spaces are replaced by zeros -extra zero's do *not* affect the checksum of 2-line elements.

Some amateurs still use "old" tracking software which requires a sidereal

time offset and it is necessary to update it at the beginning of each year.
The number for 1997 was 0.27693880 and the number for 1998 is 0.27627570.

Of course, it would be better to buy new tracking software from your local
Amsat organization; all recent software calculates sidereal time routinely.

[ANS thanks Richard W L Limebear G3RWL, for this software tip.]

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SB SAT @ AMSAT $ANS-362.07
WEEKLY SATELLITE REPORT PT 1

HR AMSAT NEWS SERVICE BULLETIN 362.07 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 28, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-362.07

MIR
MIREX chief Dave Larsen, N6CO, reports that an announced crossband
''experiment'' has been abandoned for now because of problems with the
antenna on MIR. The crossband test was to have begun December 1 and was to
have involved a 70 cm uplink and a 2-meter downlink. US astronaut Dave
Wolf, KC5VPF, has been on 145.985 MHz FM simplex from the Russian space
station, but only sporadically.

A space walk at the end of December will check and--if
necessary--repair the 2-meter/70-cm antenna that might have been
damaged during a space walk in November. The Kenwood TM-733 aboard
Mir has been connected to the spacecraft's SAFEX repeater antenna.

The Russian MAREX team and North American based MIREX team are aware of
the problem with the new TNC on Mir. They know exactly what the problem is,
They just need to wait for the crew to have time to make the adjustments.
Mirex has had detailed discussions with MAREX on which settings need to be
changed to restore full operations. The MIREX team was informed that the
crew was very busy and it may take a few days for them to make the changes.
When they do have time, they will make the adjustments. So, everyone is
asked to be patient in the meantime.
[ANS thanks the ARRL and MIREX team for this information]

SAFEX, MIR 70cm Repeater (Uplink 435.750 MHz FM, Downlink 437.950 MHz
FM, subaudible tone 141.3 Hz)
The SAFEX activity is very intermittent.
[ANS thanks the MIREX team for this information]

RS-12
(Uplink, 145.91-145.95 MHz CW/SSB, Downlink 29.41-29.45 MHz)
Operational, now in mode A.

RS-15
(Uplink 145.858-145.898 MHz CW/SSB, Downlink 29.354-29.394 MHz CW/SSB)
Operational.

RS-16
At this time only the beacons are on.
Transponder information on RS-16.
Uplink = 145.915 - 145.948 MHz
Downlink =   29.415 -   29.448 MHz
Beacons =   29.408 and 29.451 MHz
Pwr 29 MHz Down = 1.2 W /4 W

Beacon 1 = 435.504 MHz
Beacon 2 = 435.548 MHz

Pwr 435 MHz Beacons = 1.6 W

RS-17
Operational. 145.820 MHz
12/28/97 20:46 UTC
1360 Hz => 49.5C => 121F
[ANS thanks Glenn Bock for this report.

New Sputnik-40 QSL Address QSL Information is as follows:
QSL Information for SWL (Short Wave Listener)

Sergey Samburov (RV3DR)
P.O. Box 73
Korolev-10 City
141070, Russia
[ANS thanks the MIREX team for this information]

AO-10
(Uplink 435.030-435.18 MHz CW/LSB, Downlink 145.975-145.825 MHz CW/USB)
Operational.
Mark Fossum, N0NSV, reports he just completed a QSO with VE7LKA at 0652z 12/27/97. AO-10 was at a range of 37,981 from his location in Rugby ND (DN98).
AO-10 is still doing the job!
[ANS thanks Mark Fossum, N0NSV, for this update on AO-10.]

AO-27
(Uplink 145.85 MHz FM, Downlink 436.792 MHz FM)
Operational
[ANS thanks Michael Wyrick, N4USI, AO-27 Control-op, for this update]

FO-20
(Uplink 145.9-146.0 MHz CW/LSB, Downlink 435.8-435.9 MHz CW/USB)
Operational. FO-20 in mode JA continuously.
FO-20, like many Leo's is in a "sun synchronous" orbit. The precession in the RAAN of its orbit due to the earth's oblateness matches the earth's rotation around the sun so that FO-20 always has about 33 minutes of eclipse time each orbit and the rest in sunshine. A sun synchronous orbit is a retrograde LEO polar orbit with an inclination of about 98 degrees. At this inclination RAAN precession = 360 degrees in 365 days. The stability in temperature and solar energy is, needless to say, very helpful. The ratio of eclipse to sunlight can be adjusted by varying initial orbital elements. FO-29, for example, is virtually always in sunlight, UO-11 has about 22 minutes of eclipse, most seem to run about 33 minutes eclipse per orbit.

This also means that FO-20 (and other sun synchronous sats) appear at your location at about the same "sun time" every day. At my QTH FO-20 goes over about 1:30 PM and 3:30 PM every day. UO-11, AO-16, DO-17, WO-18, LO-19, UO-22, KO-25, AO-27, FO-29 etc are also in sun synchronous orbits. KO-23, RS-12/13, RS-15, though in highly inclined orbits, are not sun synchronous.
[ANS thanks Stacey Mills, W4SM, and Kazu Sakamoto, JJ1WTK, for this report]

FO-29
Voice/CW Mode JA
(Uplink 145.9-146.0 MHz CW/LSB, Downlink 435.8-435.9 MHz CW/USB)
Digital Mode JD
(Uplink 145.85, 145.87, 145.910 MHz FM, Downlink 435.910 MHz FM 9600 baud BPSK)
Operational.
26 Dec. 07:42z JA
09 Jan. 07:14z JD 1200
16 Jan. 07:52z JD 9600

23 Jan. 08:30z JA
30 Jan. 07:24z JD 1200
[ANS thanks Kazu Sakamoto, JJ1WTK, for this report.]
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SB SAT @ AMSAT $ANS-362.08
WEEKLY SATELLITE REPORT PT 2

HR AMSAT NEWS SERVICE BULLETIN 362.08 FROM AMSAT HQ
SILVER SPRING, MD, DECEMBER 28, 1997
TO ALL RADIO AMATEURS BT
BID: $ANS-362.08

KO-23
(Uplink 145.85, 145.9 MHz FM, Downlink 435.175 MHz FM,
9600 Baud FSK)
KO-23 operating normally.
[ANS thanks Jim Weisenberger, AA7KC, for this report]

KO-25
(Uplink 145.980 MHz FM, Downlink 436.5 MHz FM, 9600 Baud FSK.)
KO-25 operating normally.
[ANS thanks Jim Weisenberger, AA7KC, for this report]

OSCAR-11
(Downlink 145.825 MHz. FM, 1200 Baud PSK. Beacon 2401.500 MHz)
Operating normally.
The operating schedule is unchanged.

ASCII status (210 seconds)
ASCII bulletin (60 seconds)
BINARY SEU (30 seconds)
ASCII TLM (90 seconds)
ASCII WOD (120 seconds)
ASCII bulletin (60 seconds)
BINARY ENG (30 seconds)

There are also additional status blocks after each bulletin is
transmitted, and between ASCII TLM and WOD.

The mode-S beacon is ON, transmitting an unmodulated carrier, but
telemetry indicates that it has partially failed, and delivering half
power. This beacon is a useful test source for those testing mode-S
converters, prior to the launch of P3-D. It is considerably weaker
than DOVE, which should be used for initial testing. Any reports of
reception on 2401 MHz. would be most welcome. Please e-mail
g3cwv@amsat.org.

The 435.025 MHz. beacon is normally OFF. However it can sometimes be
heard when the satellite is being commanded by ground control, ie.
within range of Guildford, UK. When the 435 beacon is transmitting,
the 145 beacon is normally OFF. The data transmitted is mainly
binary.

OSCAR-11 users are welcome to visit my web site. It contains some
software for capturing data, and decoding ASCII telemetry and WOD.
There is an archive of raw data (mainly WOD) for analysis, which is
continually being expanded, as new data is captured. The URL is -

http://www.users.zetnet.co.uk/clivew/

[ANS thanks Clive Wallis, G3CWV, for this information]

AMSAT-OSCAR-16 (PACSAT)

(Uplink 145.9, 145.92, 145.94, 145.86 MHz FM, 1200 bps Manchester FSK
Downlink 437.0513 MHz SSB, 1200 bps RC-BPSK 1200 Baud PSK.
Beacon 2401.1428 MHz.)
Operating normally.
State of the batteries at the end of a nocturnal orbit
uptime is 1196/17:02:06. Time is Sat Dec 27 22:30:54 1997
Bat 1 V= 1.252 V Bat 2 V= 1.248 V
Bat 3 V= 1.254 V Bat 4 V= 1.257 V
Bat 5 V= 1.250 V Bat 6 V= 1.248 V
Bat 7 V= 1.253 V Bat 8 V= 1.279 V
Bat 1 Temp 6.654 D
Bat 2 Temp 6.654 D

Total Array C= 0.000 Bat Ch Cur=-0.458 Ifb= 0.182 I+10V= 0.299
TX:010C BCR:1E PWRC:59F BT: A WC:25 EDAC: C

Information about telemetry values and WOD files can be found at
http://www.arrakis.es/~ea1bcu/wod.htm
[ANS thanks Miguel A. Menendez, EA1BCU, for this report]

DO-17(DOVE)
(Downlink 145.825 MHz FM, 1200 Baud AFSK. Beacon 2401.220 MHz)
Operational.
The DOVE S band beacon is on. The frequency is 2401.220 MHz. The 2 meter
transmitter is also on, 145.825 MHz. Telemetry is being sent about every
30 seconds
A scanned image of the Dove's QSL at 425DXNews Web Site:
http://www-dx.deis.unibo.it/htdx/
[ANS thanks Jim White, WD0E, for this update]

WEBERSAT (WO-18)
(Downlink 437.104 MHz SSB, 1200 Baud PSK AX.25)
Bob Argyle, KB7KCL reports that WEBERSAT-OSCAR-18 is gathering and sending
Whole Orbit Data. The PHOTO task is being uploaded and the command team
hopes to have pictures and spectra by about the 12th of December. WO-18's
return to service is suspected to be seasonal in nature. Bob sends thanks
to all those who have sent telemetry received from WO-18.
[ANS thanks Bob Argyle, KB7KCL, and SpaceNews for
this update.]

LUSAT-OSCAR-19
(Uplink 1200 bps Manchester FSK Uplinks: 145.84, 145.86, 145.88,
145.90 MHz FM, Downlink 437.125 MHz SSB, 1200 bps RC-BPSK.)
Operating normally.
State of the batteries at the end of a nocturnal orbit
uptime is 921/08:02:34. Time is Sat Dec 27 22:07:44 1997
Bat 1 V= 1.306 V Bat 2 V= 1.302 V
Bat 3 V= 1.316 V Bat 4 V= 1.308 V
Bat 5 V= 1.316 V Bat 6 V= 1.310 V
Bat 7 V= 1.312 V Bat 8 V= 1.302 V
Bat 1 Temp 4.057 D
Bat 2 Temp 4.057 D

Total Array C= 0.008 Bat Ch Cur=-0.270 Ifb= 0.119 I+10V= 0.158
TX:109 BCR:38 PWRC:333A31 BT:34 WC:35

General information and telemetry samples can be found at:
http://www.arrakis.es/~ea1bcu/lo19.htm
[ANS thanks Miguel A. Menendez, EA1BCU, for this report]

UO-22
(Uplink: 145.900 or 145.975 MHz FM. Downlink 435.120 MHz FM
9600 Baud FSK)
UO-22 is operating normally.

Roy Welch, W0SL, and Jerry Smyth, N8ULU, have been helping out a ham, Ron Ross, KE6JAB, who has taken a trip to Antarctica. He is now active on UO-22 with his portable station. He plans on sending pictures when he can get his digital camera going. If Ron gets the camera going, you should be able to view at the following URL.
http://www.thistle.org

Chris Jackson, G7UPN/ZL2TPO, has reloaded the Store and Forward communications task on the UO-22 On-Board Computer. This task includes incremental checksums which should make uploading slightly faster.
[ANS thanks Chris Jackson, G7UPN/ZL2TPO, Ground station and Operations Manager of UO-22, for this report]

IO-26 (ITAMSAT)
Uplink 145.875, 145.900, 145.925, 145.950 MHz FM, Downlink 435.822 MHz SSB, 1200 Baud PSK)
No report at this time.

[Please send your Satellite or News reports to ANS Editor BJ Arts, WT0N, via e-mail, at bjarts@the-bridge.net or to wt0n@amsat.org]

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